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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of)

Communications Assistance)
for Law Enforcement Act (CALEA))
)
)

CC Docket No. 97-213

To: The Commission

COMMENTS OF METRICOM, INC.

METRICOM, INC.

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SUMMARY

In response to the Commission's Notice of Proposed Rulemaking in this proceeding, Metricom, Inc. ("Metricom") is filing these Comments to demonstrate that the Commission must exercise its authority under Section 1008(b)(1) of the Communications Act to exempt carriers that provide predominantly information services, and who also provide ancillary non-voice, telecommunications services, from compliance with the Communications Assistance for Law Enforcement Act ("CALEA").

Metricom points out that CALEA's legislative history clearly demonstrates Congress' intent to exclude information services from CALEA's requirements, regardless of whether the entity that provides such services also provides telecommunications services.

Metricom argues that such an exemption is justified because of the *de minimis* telecommunications services provided, the potential for impeding technological development, the negative impact that causing such entities to comply with CALEA would have on competition, the inability of such entities to reasonably achieve compliance with CALEA, and the fact that the burden of compliance, even if it were possible, would outweigh the public benefit to be gained.

Accordingly, the exemption proposed by Metricom is consistent with the letter and spirit of CALEA.

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To: The Commission

COMMENTS OF METRICOM, INC.

Metricom, Inc. ("Metricom"), by its attorneys, pursuant to Commission's Notice of Proposed Rulemaking in the above-styled proceeding¹ and § 1.415 of the Commission's rules, hereby respectfully submits the following Comments concerning the applicability of the Communications Assistance for Law Enforcement Act ("CALEA") on predominantly information service providers which also provide *de minimis*, non-voice, telecommunications services. As discussed more fully below, such entities should be exempt from CALEA requirements, consistent with the intent of CALEA, because of the *de minimis*, non-voice, telecommunications services provided, the potential for impeding technological development, the negative impact on competition, and the inability of such entities to reasonably achieve compliance with CALEA.

¹ In the Matter of Communications Assistance for Law Enforcement Act, *Notice of Proposed Rulemaking*, FCC 97-356, (rel. Oct. 10, 1997) (hereinafter "NPRM"); *Errata*, CC Docket No. 97-213, (rel. Oct. 24, 1997) (establishing a Dec. 12, 1997 Comment filing date); 62 Fed. Reg. 63302 (Nov. 28, 1997).

I. METRICOM AND ITS RICOCHET™ SERVICE²

1. Metricom, founded in 1985, is a young, rapidly growing, technologically innovative company based in Silicon Valley. Encouraged by Commission actions in various Part 15³ proceedings encouraging the development of exciting and new spread spectrum technologies,⁴ Metricom is a pioneer in the development of leading edge, state-of-the-art, unlicensed,⁵ frequency hopping, spread spectrum packet-switched radio systems. Among other applications, Metricom has developed technologically sophisticated Part 15 devices that enable the offering of a wireless data transmission service -- called Ricochet -- to the public. Ricochet subscribers primarily use the service for wireless access to the Internet. Ricochet service is currently available commercially in the Silicon Valley/San Francisco Bay, Seattle, and Washington, D.C. areas, at a number of colleges and universities,⁶ and at several airports.⁷ Ricochet currently has approximately 20,000 subscribers, consisting of commercial, government, individual and

² Ricochet is a registered trademark of Metricom, Inc.

³ 47 C.F.R. § 15.01 *et seq.*

⁴ *See, generally*, Spread Spectrum and Other Wideband Emissions Not Presently Provided for in the FCC Rules and Regulations, *Report and Order*, 101 FCC 2d 419 (1985); Amendment of Parts 2 and 15 of the Commission's Rules With Regard to the Operation of Spread Spectrum Systems, *Report and Order*, 5 FCC Rcd 4123 (1990).

⁵ Pursuant to Part 15, devices may transmit without an actual license provided: (1) the equipment is certified by the Commission; (2) operation is within specified technical parameters; and, (3) no interference is caused to, and interference must be accepted from, other authorized users of the specific frequency band.

⁶ Ricochet networks are installed at Austin College, California Polytechnic University at San Luis Obispo, Oregon State University, San Francisco State University, Stanford University, University of Oregon, University of Miami, University of California at Berkeley, University of California at Santa Cruz, and George Washington University.

educational users. Over 1,000 Ricochet modems are being used in K-12 schools in Ricochet service areas.

2. Ricochet is a data transmission service that provides local and wide-area wireless connectivity to the Internet, and to other computers and modems, currently at end-user data rates of up to 28.8 kbps. The next generation of Metricom devices, to be introduced commercially in approximately 12 months, will provide end-user data rates of up to 128 kbps -- equivalent to ISDN services. A Ricochet subscriber connects a small, portable radio frequency ("RF") modem about the size of a small TV remote control, to the serial port of a computer or personal digital assistant. This RF modem operates at very low power -- a maximum of 1 watt of output power. Using standard "off-the-shelf" software, the subscriber can remotely access the Internet (on an unlimited-usage basis), send and receive electronic mail, access popular commercial on-line services, connect with other computers and other Ricochet modems, and interconnect with the public switched network ("PSN") for data transmissions.⁸

3. Metricom employs a mesh network architecture for its provision of Ricochet service. A subscriber's RF modem communicates by radio with nearby shoe box-sized poletop units, which are generally mounted on streetlights. Passing through a web of poletop units, the subscriber's transmission is relayed to one of many wired access points ("WAPs"), where it is

(Cont'd from previous page)

⁷ San Francisco Int'l., San Jose Int'l., Oakland Int'l., Sea-Tac, Washington Nat'l, Dulles Int'l., JohnWayne/Orange County, Los Angeles Int'l., Baltimore /Washington Int'l, LaGuardia, Phoenix and Minneapolis.

⁸ In order to have the capability to interconnect with the PSN -- a service which Metricom calls "telephone modem access" or "TMA" -- a subscriber must order an additional service and pay an additional fee. Currently, the fee for unlimited Internet access is \$29.95 per month, and the fee for TMA is an additional \$5.00 or \$10.00 per month, depending upon the desired amount of use.

transferred to Metricom's high-speed frame relay (wired) data network, made up of communications lines leased from various carriers. If the destination of the subscriber's transmission is another Ricochet modem, the transmission will travel out of another WAP near the receiving modem and pass through a web of poletop units to the receiver, or it could go directly to another modem provided it is within range.

4. The mesh network is a microcellular design in which each poletop unit serves a "microcell" roughly a quarter-mile in radius. The Ricochet network is not organized in a hierarchical manner. Instead, Ricochet employs a distributed network architecture, similar to the architecture of the Internet itself. Any one or several of the poletop units can be inoperative and the system will continue to function because transmissions will be completed through other routes. Similarly, because of the design of the network, transmission paths are dynamically assigned -- *i.e.*, the network decides, on a case by case basis, each path for each transmission. Because the system utilizes packet switching, each transmission is broken down into small packets (including both user information and network overhead data) for transmission over the network. Within a single transmission, each packet can be sent via a different route -- passing through different poletop units, and even different WAPs -- on the way to its ultimate destination. Moreover, in any one transmission link -- either wireless or wired -- packets from different sources with different destinations are interleaved.

5. Accordingly, unlike cellular telephony, this technology has no central location through which communications are routed. No actual circuits are employed, and Ricochet has no switching office or switching database. Because of the design of the Ricochet system, Metricom does not know in advance whether a subscriber's transmission will pass through a particular WAP, or even through any WAP at all. Similarly Metricom does not know in advance whether a

transmission will pass through a particular poletop unit, or go directly from modem to modem without passing through the network at all. Moreover, because Ricochet modems are frequency-hopping spread-spectrum devices, the packet stream emanating from a Ricochet modem or poletop unit switches frequencies in a pseudorandom order determined by the intended receiving unit.⁹

II. PREDOMINANTLY INFORMATION SERVICES SHOULD BE EXEMPT FROM CALEA REQUIREMENTS

6. CALEA's definition of "telecommunications carrier" specifically excludes "persons or entities *insofar as* they are engaged in providing information services."¹⁰ This exclusion is *not* limited to entities that provide "exclusively" information services as the Commission states at ¶ 13 of the NPRM. Rather, the definition applies to any and presumably all persons and entities "insofar as" they provide information services. This language suggests that a single entity could provide both information services, which are excluded from CALEA, and other telecommunications services, which are included. In other words, CALEA is not intended to create an "all or nothing" proposition. Instead, the express definition of telecommunications carrier contemplates that an entity could be subject to CALEA to only a limited extent *i.e.*, only for its services that are not information services.

⁹ Pursuant to § 15.247 of the Commission's rules, Metricom's system transmits over 162 channels, and cannot transmit on average any one channel for more than 0.4 seconds within a 20 second period.

¹⁰ CALEA defines "information services" as the offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications; *and* includes a service that permits a customer to retrieve stored information from, or file information for storage in, information storage facilities; electronic publishing; and electronic messaging services; *but* does not include any capability for a telecommunications carrier's internal management, control, or operation of its telecommunications network. 47 U.S.C. § 1001(6) (emphasis added).

7. Metricom provides primarily information services, namely, connecting people to the Internet, permitting them to send and receive data from information storage facilities, and maintaining e-mail servers. Accordingly, Metricom submits that it must be excluded from the definition of telecommunications carrier for the information services it provides, and therefore is exempt from CALEA's requirements to the extent that it provides such information services.

8. To the extent Metricom provides "telecommunications services" it could still fall within the definition of telecommunications carrier for the purposes of those other services and could, therefore, be subject to CALEA only for this limited purpose. However, because Metricom provides only a *de minimis* amount of non-voice telecommunications services, it should be excluded from CALEA's requirements under the Commission's discretionary powers.

9. CALEA allows the Commission to exempt by rule "any class or category of telecommunications carrier" after consulting with the Attorney General.¹¹ The Commission has invited comments on whether it should exercise its discretion to exclude any classes or categories of carriers, and how such exclusions would be consistent with CALEA.¹² There are several very good reasons, all fully consistent with CALEA's intent and purpose, why carriers such as Metricom should receive an exemption from CALEA.

10. The Commission proposes to exclude providers of "exclusively information services" such as electronic mail providers and on-line service providers. The Commission's emphasis on information service *providers* as a class contravenes CALEA's express language. As noted above, CALEA does not exclude only information service providers that provide "exclusively information services" from the definition of telecommunications carrier. In so

¹¹ 47 U.S.C. 1001(8)(C)(ii).

¹² NPRM at ¶ 19.

proposing, the Commission is reading into CALEA an additional requirement that it does not contain. Congress expressly chose to exclude persons or entities “insofar as they are engaged in providing information services.” Congress’ chosen language cannot and should not be read to mean that persons or entities will be exempted only if they provide solely information services. Further supporting this argument is the provision exempting “information services” from CALEA’s capability requirements.¹³ This Section of CALEA also does not exempt “information service *providers*,” but rather the services themselves. Thus, to the extent that Metricom provides information services, no matter what type of entity it is ultimately determined to be, those information services should not be subject to CALEA’s capability requirements.

11. Furthermore, the Judiciary Committee did not intend the information services exclusion to be narrowly construed. Rather, in adopting the information services exclusion, the Judiciary Committee intended “not to limit the definition of ‘information service’ to such current services [email and online service providers], but rather to anticipate the rapid development of advanced software and to include such software services in the definition of ‘information services.’”¹⁴ Therefore, Congress expressly contemplated excluding other types of information services that might develop after the passage of CALEA. Metricom’s services could be considered among those whose development Congress anticipated when it enacted CALEA, and accordingly should be excluded from complying.

¹³ 47 U.S.C. § 1002(b)(2)(A).

¹⁴ H.R. Rep. No. 103-827, at 21, *reprinted in* 1994 U.S.C.C.A.N. 3489, 3501.

III. METRICOM SHOULD BE DEEMED TO BE IN COMPLIANCE WITH CALEA BECAUSE ITS COMPLIANCE IS NOT REASONABLY ACHIEVABLE

12. The NPRM proposes rules for reviewing carrier petitions that request a determination that compliance with CALEA's electronic surveillance capability requirements is not "reasonably achievable."¹⁵ CALEA sets forth a list of factors to be considered by the Commission.¹⁶ If the Commission determines that compliance is not reasonably achievable, the affected carrier may petition the Attorney General to compensate the carrier for the costs necessary to make compliance reasonably achievable.¹⁷ If the Attorney General does not agree to pay such costs, the carrier will be deemed to be in compliance with CALEA's assistance capability requirements.¹⁸

13. Metricom's compliance with CALEA is not reasonably achievable, and for that reason it should be deemed to be in compliance. For the purposes of CALEA compliance,

¹⁵ NPRM at ¶ 48.

¹⁶ The factors include (1) the effect of compliance on public safety and national security; (2) the effect of compliance on rates for basic residential telephone service; (3) the need to protect the privacy and security of communications not authorized to be intercepted; (4) the need to achieve the capability assistance requirements by cost effective methods; (5) the effect of compliance on the nature and cost of the equipment, facility, or service at issue; (6) the effect of compliance on the operation of the equipment, facility, or service at issue; (7) the federal policy of encouraging the provision of new services and technology to the public; (8) the financial resources of the carrier; (9) the effect of compliance on competition in the provision of services; (10) the extent to which the design and development of the equipment, facility, or service was initiated before 1/1/95; and any other factors the Commission deems appropriate. 47 U.S.C. § 1008(b)(1).

¹⁷ 47 U.S.C. § 1008(b)(2)(B).

¹⁸ *Id.*

telecommunications services provided through Ricochet can be divided into two categories.¹⁹

First, Ricochet can be used for direct modem-to-modem communication either through the network or outside of the network. Second, Ricochet can be used to access other computers interconnected with the public switched telephone network by making a call over a standard telephone modem connected to the Ricochet network using TMA.²⁰ As discussed below, in neither of these cases can Metricom reasonably comply with CALEA.

A. Metricom Cannot Intercept Modem-to-Modem Communications in Compliance with CALEA

14. A Ricochet subscriber can use a Ricochet modem to send data to, and receive data from, another Ricochet modem. To the extent that subscribers use Ricochet in this way, Ricochet appears to be a telecommunications service.²¹ Therefore, compliance with CALEA would ordinarily be necessary in this case. However, due to the unique architecture of the Ricochet network, compliance is not possible.

15. When a subscriber initiates a transmission, the subscriber's modem attempts to communicate through a particular poletop unit that the modem has identified as its "best" node. In theory, a "wiretap" could be placed at that poletop, and could intercept a portion of the subscriber's communications. However, Metricom could not guarantee to intercept all of the subscriber's communications in this manner, for several reasons. First, the whole notion of Ricochet service is to provide portable communication, so the subscriber may physically move

¹⁹ Metricom is not required to comply with CALEA to the extent that Ricochet is used to obtain wireless Internet access, because that is an information service, not a telecommunications service. See discussion, *supra*, at ¶¶ 6-7.

²⁰ See discussion *supra*, note 8.

²¹ See discussion, *supra*, at ¶¶ 6-8.

from one location to another. This movement may cause the subscriber's modem to reconfigure its "best" node. Second, the "best" node poletop unit may become momentarily busy with other communications, causing the subscriber's modem to communicate through another nearby poletop unit and bypass such a wiretap completely. Third, local interference may be present intermittently, again causing the subscriber's modem to switch to another poletop unit for all or part of a transmission.²²

16. Attempting to intercept a subscriber's communications at any other poletop unit fares no better. Communications between poletop units are similar to communications from modem to poletop unit. Messages are adaptively routed depending upon factors such as the level of traffic in various segments in the network and the presence of interference. Nor is it possible to intercept a subscriber's communications at a WAP. Not all communications from modem to modem will pass through a WAP -- only those communications for which a wireless transmission path is not available. Those communications that do enter Metricom's wired frame relay network do not enter at a predictable WAP. Major Ricochet service areas have multiple WAPs, and a particular subscriber's communications can enter the wired network at any one of them. Even the individual packets comprising a subscriber's message may be routed through different WAPs.

17. A broadband packet listening technology could be designed to pick up a nearby subscriber's communications as they are transmitted over-the-air.²³ However, such a device

²² Metricom's modems operate on a secondary basis in the 902-928 MHz band, which is shared with many other uses, including consumer devices, industrial, scientific, and medical devices, vehicle location monitoring equipment, and amateur operations. Interference is expected in this band, and the Ricochet network is designed to adapt to such interference.

²³ Note that such technology does not currently exist, is not presently contemplated, and would require considerable engineering resources and development costs.

would be unreliable at best in intercepting a subscriber's communications. The subscriber's modem orchestrates its communication with a particular poletop unit through a series of handshakes and frequency hops. A listening device would not be able to operate through the interference that is present in the Ricochet frequency band because it does not have the benefit of this handshaking protocol. If a listening device were placed close enough to the subscriber's modem to pick up all communications transmitted by that modem -- which could not be more than a few hundred feet away -- it would still be extremely difficult and costly to intercept communications sent and received by that modem.

18. Metricom can envision only one method of reliably intercepting all of a particular subscriber's communications, and that method does not comply with CALEA because it is not unobtrusive.²⁴ Interception could theoretically be accomplished by instructing the subscriber's modem to duplicate each packet transmitted and received, and send the duplicated packets to a special receiver using the normal Ricochet transmission protocol.²⁵ The receiver could then record the packets for law enforcement. If this method of interception were enabled, the subscriber would immediately notice a severe performance degradation. The time to transmit or receive a packet would more than double, because of the time involved in creating and transmitting the duplicate packets. A drop in performance by more than a factor of two is hardly unobtrusive. Therefore, this method, while technically feasible, is legally precluded.

²⁴ See 47 U.S.C. § 1002(a)(4) (telecommunications carriers must "facilitat[e] authorized communications interceptions and call identifying information *unobtrusively* . . ." (emphasis added)).

²⁵ Again, it bears noting that the technology for such an interception method does not currently exist and is not presently contemplated.

B. Metricom Cannot Intercept TMA Communications in Compliance with CALEA

19. As described above, a Ricochet subscriber who pays for TMA capability can also use a Ricochet modem to connect to another computer or network through the PSN. To accomplish this, the subscriber enters a telephone number to be dialed. The Ricochet network then identifies a WAP which has interconnection capabilities in the vicinity of the requested telephone number, and routes the subscriber's transmissions to that WAP. The WAP selects a telephone modem from a modem bank maintained for this purpose, and uses that modem to dial the requested telephone number. The connection is made, and the subscriber's communications proceed through the PSN. This aspect of Ricochet operation appears to be a telecommunications service, and ordinarily would require compliance with CALEA. However, in the Ricochet network, compliance is not reasonably possible.

20. For reasons described above, the subscriber's communications cannot be intercepted at the subscriber's Ricochet modem, the poletop unit, or the WAP. The only additional possibility for interception that a TMA call presents is in the PSN. However, a TMA call cannot be intercepted simply in the PSN because the telephone modem through which the subscriber's communications ultimately pass cannot be ascertained in advance. The selection of a particular telephone modem by the Ricochet network is essentially a random choice, and a subscriber could defeat a wiretap on any particular telephone modem by hanging up and calling again. While a potential solution to this problem might be to intercept communications on all telephone modems in the entire Ricochet network, such a broad-brush approach would violate CALEA's requirement to protect the confidentiality of communications *not* authorized to be intercepted.²⁶

²⁶ See 47 U.S.C. 1002(a)(4).

IV. THE COMMISSION SHOULD EXEMPT TELECOMMUNICATIONS CARRIERS FROM COMPLIANCE WITH CALEA IF THE BURDEN OF THEIR COMPLIANCE OUTWEIGHS THE PUBLIC BENEFIT TO BE GAINED

21. The Commission seeks comment in the NPRM on whether it should “include in the definition of telecommunications carrier for purposes of CALEA, any entity that holds itself out to serve the public indiscriminately in the provision of any telecommunications service.”²⁷ The Commission has authority under Section 1001(8)(C)(ii) of the Communications Act, as amended, to exempt “any class or category of telecommunications carrier” after consulting with the Attorney General. Congress created this exclusion “in recognition that law enforcement does not need capability assistance from all carriers....”²⁸ The Commission itself pointed out that because “the 12 largest local exchange carriers deliver more than 90% of the total dialing equipment minutes each year ... [i]t is conceivable that many of the small and rural telecommunications carriers subject to CALEA requirements may never be asked to conduct electronic surveillance.”²⁹

22. Metricom recommends that, rather than adopting an all-inclusive definition of telecommunications carriers that must comply with CALEA, the Commission should exercise its authority to exempt those entities for which the burdens of compliance so vastly outweigh the usefulness of modifications to their networks for interception that compliance makes little or no sense from the standpoint of economics or procompetitive policy. The NPRM already proposes the use of a class, based on annual operating revenue, for exemption from detailed reporting

²⁷ NPRM at ¶ 16.

²⁸ 140 Cong. Rec. H10781 (daily ed. Oct. 4, 1994) (statement of Rep. Markey).

²⁹ NPRM at ¶ 34.

requirements.³⁰ The same concerns that have driven the Commission to recommend lesser reporting requirements for certain small entities that are not likely to be called upon to intercept many communications should also persuade the Commission to exempt those carriers or classes of carriers for which the burden of compliance outweighs the public benefit to be gained.

23. Congress expressly contemplated that there may be instances in which the cost to a carrier of complying with CALEA may be too burdensome to subject the carrier to CALEA's assistance capability requirements. Specifically, Congress instructed courts, in issuing enforcement orders, to determine whether compliance with CALEA's requirements is reasonably achievable, taking into consideration economic factors. "This limitation is intended to excuse a failure to comply with the assistance capability requirements or capacity notices where the cost of compliance is wholly out of proportion to the usefulness of achieving compliance for a particular type or category of services or features."³¹

24. The public benefit of CALEA compliance for the limited non-information, non-voice services such as those provided by Metricom that fall within the definition of telecommunications services is small, according to the legislative history and policy goals of CALEA. The legislative history of CALEA reveals Congress' overwhelming focus on telephony. The policy underlying CALEA is to deal with such technological advances as digital voice transmission, wireless voice transmission, call forwarding, speed dialing, conference calling, etc., which have thwarted law enforcement efforts at court-ordered interception.³² All of this technology deals with voice communication, and Congress paid little attention to data

³⁰ NPRM at ¶ 35.

³¹ H.R. Rep. No. 103-827, at 28 (1994), *reprinted in* 1994 U.S.C.C.A.N. 3489, 3508.

³² *See* H.R. 103-827, 103d Cong., 2d Sess., pt. 1 at 9-13 (1994).

transmission. From a common sense perspective, what Metricom is doing simply does not appear to be the type of activity with which Congress was concerned when it enacted CALEA. The burden of CALEA compliance on non-voice services such as those provided by Metricom must therefore be weighed against the small benefit to be gained, given that they are outside the intended coverage of CALEA.

25. Furthermore, the burden that compliance would impose on Metricom is great, as the discussion above has demonstrated.³³ Metricom cannot even envision a technology for compliance, much less put such a technology into place. This burden is vastly disproportionate to the *de minimis* amount of Metricom's activity that might fall within CALEA. As a matter of good policy, and in light of the Commission's pro-competition stance, the Commission should not require Metricom to fund a vast network modification at tremendous expense that would bring it into compliance for only minimal data transmission telecommunications activities.

26. The costs of compliance do not fall only on individual carriers such as Metricom; they are borne by the public as well, in the form of decreased competition. For example, if Metricom were forced to comply with CALEA, its technological resources would have to be directed toward attempting to devise and develop some way to comply with CALEA, and not toward developing new and better services in the public interest. This would contravene CALEA's stated intent to avoid impeding the development of new services and technologies.³⁴ Furthermore, if a means could be developed to comply with CALEA, then further technological development would be made much more difficult, or even stopped altogether, by the problem of bringing new products and services into compliance with CALEA. Finally, if Metricom were

³³ See discussion *supra*, Part III.

³⁴ See H.R. 103-827, 103d Cong., 2d Sess., pt. 1 at 13 (1994).

forced to devote its resources to complying with CALEA, it would have significantly fewer resources available to devote to technological innovation of the type Congress hoped to foster.³⁵

VI. CONCLUSION

Exempting *de minimis*, non-voice, telecommunications services from compliance with CALEA is within the letter and spirit of CALEA. The exemption is justified based upon the fact that forcing compliance would impede technological development, be financially unreasonable, and negatively impact competition in the marketplace for data transmission services. In addition, as Metricom has demonstrated, at least for its Ricochet system, it is not possible to reasonably achieve compliance with CALEA. Accordingly, Metricom submits that *de minimis*, non-voice, telecommunications services should be excluded from the definition of "telecommunications carrier."

Respectfully submitted,

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³⁵ See, e.g., 140 Cong. Rec. H10781 (daily ed. Oct. 4, 1994) (statement of Rep. Markey) (The factors contained in CALEA for the Commission to consider in determining whether compliance with CALEA is reasonably feasible are intended, *inter alia*, to ensure that "the goal of encouraging competition in all forms of telecommunications is not undermined."). If Metricom were forced out of business as a result of being required to comply with CALEA's requirements, it would have grounds to argue that the government engaged in an unlawful taking of its property.